Demonstration: CRIB 181

COLLISION REPAIR INFORMATION

FOR THE COLLISION REPAIR PROFESSIONAL

TITLE: WELDING SPECIFICATIONS & SUBSTITUTIONS

SECTION: BODY COMPONENT REPLACEMENT BULLETIN #181 (PAGE 1 of 2)

MODELS: ALL TOYOTA, LEXUS, and SCION

DATE: DECEMBER 2011

Welding specifications for body components are published in model-specific Collision Damage Repair Manuals for all Toyota, Lexus, and Scion vehicles. Welded component installation may require a combination of welding methods including:

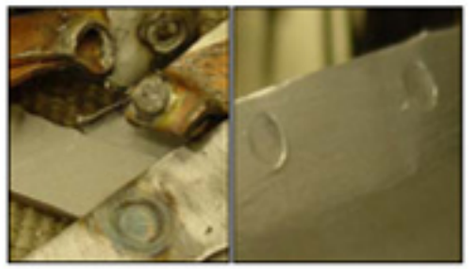
- STRSW (Squeeze-Type Resistant Spot Welds)
- GMAW/MIG (Gas Metal Arc/Metal Inert Gas - Welding)
- Arc Brazing (Brazing)

The STRSW method best replicates factory attachment methods, and when performed correctly, offers the following advantages over GMAW/MIG plug welding:

- Equipment is readily available in most markets
- Comparable to factory welding methods and appearance
- Does not produce ultra violet radiation
- Reduces heat effect zones and corrosive hot spots
- Reduces the emission of metal grinding particles when finishing
- Reduces the emission of stray sparks
- Reduces airborne contamination from burnt coatings

STRSW may be substituted for GMAW/MIG plug welds, however, STRSW substitutions should match factory weld size, strength and appearance.

Appearance alone does not validate the strength of a weld. Weld strength must be validated by tuning the welder and performing destructive testing. Tuning the welder and destructive tests must be performed on metal of the same thickness and composition as that of the component being replaced.



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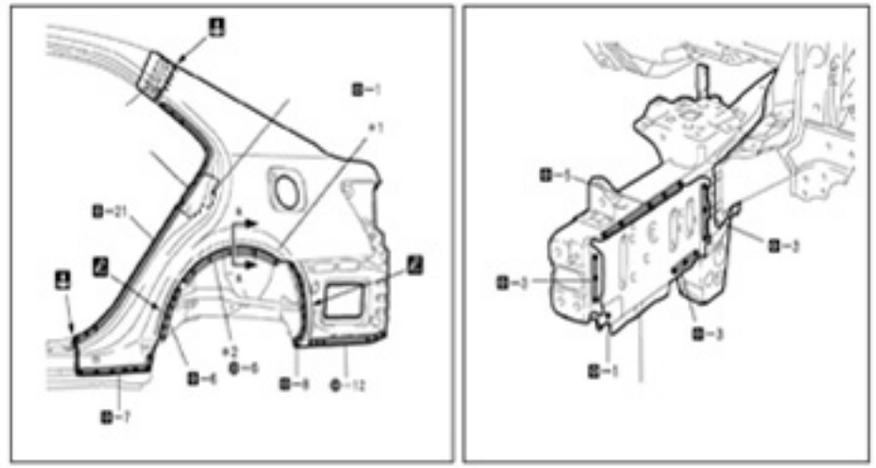
Always review Toyota Repair Manual Specifications and Collision Repair Information Bulletins before proceeding with any welded body component replacement. Toyota technical reference information can be accessed through (www.techinfo.toyota.com).

The following illustrations are examples of body component welding specifications that call-out the locations of GMAW/MIG welds that may be substituted with STRSW. For model-specific instructions specifications and reference charts, review the applicable Collision Damage Repair Manual.

The GMAW/MIG plug welds, designated by the dark square symbol (■) in the following illustrations may be substituted with proper size and strength STRSW (●).



NOTE:
STRSW substitutions should match factory spot welds in size, strength and appearance. If replacement welds are larger or smaller, resize electrode contact tip to match. Do not STRSW over factory weld locations.

Toyota Collision Repair & Refinish Training provides detailed information discussion and training on welding topics such as these in courses:

- PB300 Welding Techniques For Collision Repair Pre-Work (web-based e-learning)
- B300 Welding Techniques For Collision Repair
- 301 Non-Structural Body Repair Techniques
- 460 Structural Body Repair Techniques

Training information can be accessed through (www.crrtraining.com).

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